

Remarks

The present application stands rejected under 35 U.S.C. 103 as being unpatentable over Ross, et al., Graham, Hartman, et al., and Trott, et al.

The Examiner asserts Ross, et al. for the proposition that Ross, et al. teaches the use of a pneumatic motor within a housing with a cam in a vitrectomy probe. While Ross, et al. indicates that motor 24 may be other than the disclosed electrical motor and may in fact be a pneumatic motor, it is respectfully asserted that there is no indication that Ross, et al. contemplated the use of a turbine motor in their invention. Rather, it is likely that Ross, et al. were referring to prior art vit cutter pneumatic motors, such as described in the background of the present application which included diaphragm driven probes. In addition, it is not clear how a turbine motor would be incorporated into the vit cutter of Ross, et al. without placing the inlet and outlet lines along handpiece 26 which would interfere with a surgeon gripping the vit cutter of Ross, et al.

The Examiner further supports his position that the use of a turbine motor would have been obvious in Ross, et al. by citing Graham, which specifically mentions that a fluid turbine motor may be substituted for an electric motor. However, it is respectfully asserted that Graham has been improperly cited and combined with Ross, et al., Graham does not teach a reciprocating movement of a cutter but rather a side-to-side lateral movement of a saw blade. Ross, et al. and Graham each have relatively complicated motion mechanisms compared to the present invention.

In addition, the presently pending independent claim 1 has been amended to more specifically set forth the present invention. Specifically, language has been added to positively recite that the cam is attached to the vanes and rotatably attached within the housing. It is this attachment of the cam directly to the vanes as specifically claimed that allows for such the compact and simple design of the present invention. In this way, the present invention allows for a vitreous cutter to be manufactured in a very compact and easily assembled design. None of the cited art shows or suggests attaching a cam directly to the vanes as specifically claimed in the present invention; therefore, it is respectfully submitted that claim 1 is in condition for allowance and such allowance is requested at an early date.

Claims 4 – 6 have been rejected as being obvious over the above-discussed art in addition to Trott, et al. The Examiner has cited Trott, et al. for the proposition that the inclusion of a brake in a surgical instrument in conjunction with a pneumatic motor is not new. Applicants do not assert to have invented the use of a brake in a surgical instrument in conjunction with a pneumatic motor. However, the Applicants do assert that they have invented the brake mechanism as claimed in claims 4 – 6, wherein the brake of the present invention stops rotation of the cam in less than one revolution of the cam and therefore is able to stop the vitreous cutter in a known position. This is significantly different from the break of Trott, et al. Trott, et al. have an annular ring

brake mechanism 150 with an annular friction pad 152 that grabs a hold of rotor 120 to prevent rotation. There is no indication in Trott, et al. that such rotation can be stopped within one rotation of the cam, such as specifically claimed in the present invention. This very quick stoppage of the rotation of the cam of the present invention by the claimed notch and arm combination allows the vitreous cutter to be stopped in a known position, which is greatly beneficial to a retinal surgeon, as set forth in paragraphs 16 – 18 of the present application.

Therefore, it is respectfully submitted that claims 1 – 7 as amended are in condition for allowance over the cited art, and such allowance is requested at an early date.

Respectfully submitted,



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DATE: May 26, 2004